IT Sourcing:
An Overview and
Case Study of the Navy Marine Corps Intranet

Presented to:
34th Annual DoD Cost Analysis Symposium
2 February 2001

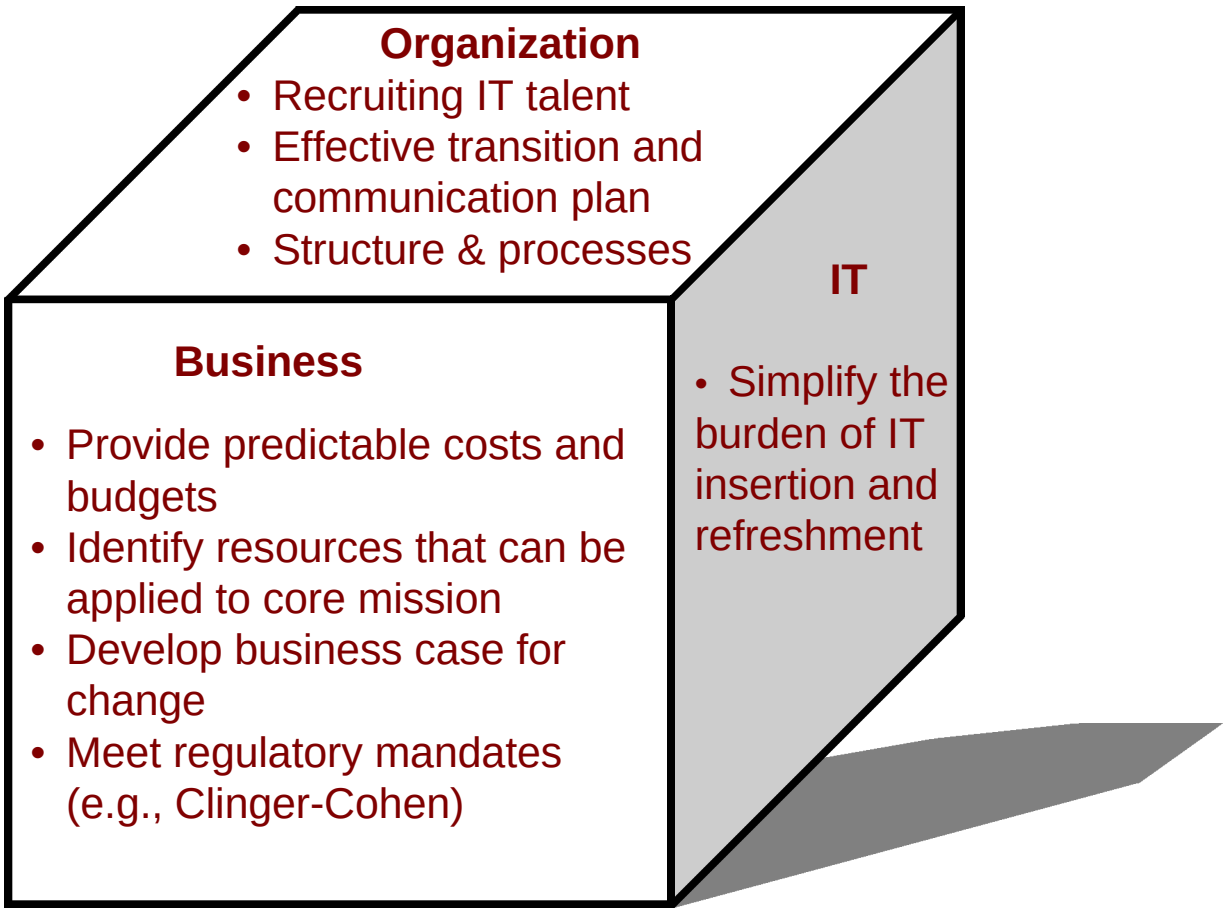
Agenda

- **Overview of IT Sourcing**
  - What is IT Sourcing
  - Why Consider it?
- **What Services are Provided in the Market?**
- **How to do it -- Analysis Questions**
- **A Case Study - Navy Marine Corps Intranet**

What is IT Sourcing?

- **IT Outsourcing –** Transfer of any IT function outside of the agency
  - **Seat Management** – A subset of IT outsourcing that entails the transfer of desktop services (and assets) outside of the agency.
  - **Desktop Services** – Include the distributed computing environment (i.e., client, server, and network assets) as a minimum, and can be extended to include telephony, applications, etc. as desired.
- **IT Privatization –** Transfer of any IT asset outside of the agency
- **IT In-Sourcing –** Transfer of any IT function within the agency
- **IT Cross-Servicing –** Transfer of any IT function to another agency in the Government

Every organization faces different obstacles and challenges in supporting their information technology infrastructure



Every organization faces different obstacles and challenges in supporting their information technology infrastructure

Key Questions

Business	Organization	Technology
What is the current IT baseline?	What is the most effective implementation strategy to ensure and efficient transition?	What is your current service level baseline?
How can you increase service levels in a cost efficient manner?	What will the cultural impact be to your organization?	How can technology improvement help to optimize the efficiency of the IT operations in your organization?
How to find a cost effective way of getting specialized IT expertise?	How should you manage the cultural impact to your organization?	How can you ensure that your IT will continue to meet your mission demands?
How to know and track your on-going IT costs?	How do you communicate and manage change throughout your organization?	How can you avoid IT "brain drain"?

There are also some sound reasons to be wary of IT Sourcing...

- Reduce flexibility/responsiveness of IT environment
- Drain managerial resources from mission/critical functions to overcome cultural, organizational and/or political barriers
- Create anxiety and loss of morale among staff and customers alike
- Create a dysfunctional work-around environment that prevents technology insertion
- Compromise security
- Maintain or increase costs over system life cycle

...not the least of which are the repercussions of failure.

IT Sourcing spans an array of various IT functions, any or all of which can be sourced through a multitude of contract vehicles.

Sources

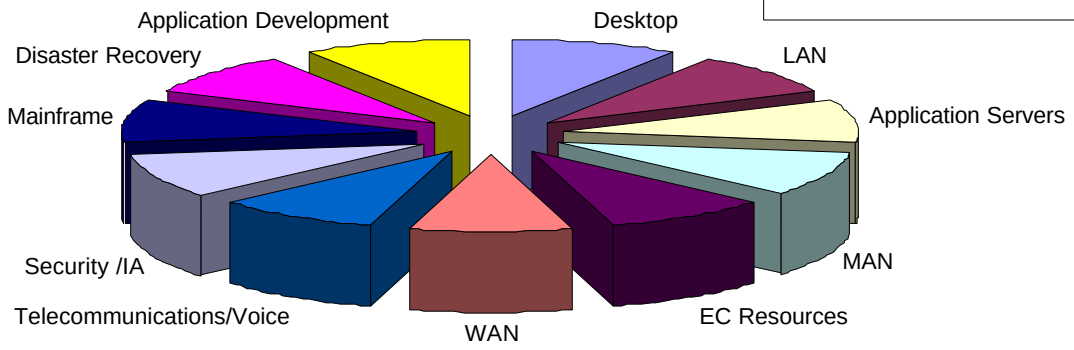
Selected Contract Vehicles	Desktop Leasing	Desktop Support	Server Support	Security Services	LAN Support	WAN Support	EC Resources	Application Server Support	Disaster Recovery	Application Development	Mainframe Support	Voice System Support
GSA-SEAT	√	√	√		√			√				
NASA-ODIN	√	√										
GSA-Milennia (FEDSIM)		√	√	√	√							
GSA-Virtual Data Center												
GSA-FTS2001												√
FSS-Schedule										√		
ECS II	√											
FTS - Safeguard												
SISS				√	√	√	√	√	√			
Trust		√	√	√	√	√	√	√	√	√		
Assorted SETA contracts	√	√	√	√	√	√	√	√	√	√	√	√

ILLUSTRATIVE DATA

Cost Drivers

- **Type of service**
  - Desktop
  - Helpdesk
  - LAN
  - Enterprise
- **Service levels**
  - Response times
  - Restorable times
- **Types of equipment**
  - Newest
  - Common
  - Mature

Services



… but the issues remain:

1) whether to source? 2) what functions to source? 3) which supplier(s) to engage?

Booz·Allen IT Sourcing Approach parallels the natural IT life-cycle, and involves skills from various teams across the firm.

1) Assessment Stage

Identifying the real solutions

- Baseline existing environment
  - Identify "as is" SL and TCO
- Analyze opportunities and barriers
  - Strategic/Mission
  - Economic/Funding
  - Organizational/Cultural
  - Process/Procedural
  - Technological/Architectural
- Identify viable options

2) Solution Stage

Specifying the right solution

- Develop the business case
  - Identify "to be" SL and TCO
- Define risk mitigation tactics
- Perform market/vendor assessments
- Develop organizational change management and communication plans
- Definatize the sourcing strategy

3) Implementation Stage

Engaging the right source

- Provide transition management
- Support source acquisition
- Manage organizational change
- Provide infrastructure transfer services
- Manage expectations

4) Operations Stage

Ensuring operational success

Monitor & measure source performance
- Process objectives
- Economical objectives
- technical objectives

- Monitor & measure agency performance
  - Mission objectives
  - Organizational objectives
- Evaluate, expand, evolve

The Assessment and Solution stages provide the business case and viable solution, but there are many critical elements with ensuring successful change.

- Confirm business and other objectives and measures of success
- Identify and address the customer, organizational, and human resources issues early
- Establish a solid communications plan as early as other plans
- Design or redesign IT management functions, processes, and staffing arrangements while acquisition is being designed
- "Instrument" the entire sourcing process with appropriate metrics and install a plan to use them into the implementation period -

Case Study - NMCI

What is NMCI?

Mission Statement

To enable the sharing of information worldwide with those who need it, when they need it, and to enhance enterprise-wide work, training, and quality of life for every Marine, Sailor, and DON Civilian.

Vision

Building the modern Navy-Marine Corps on the transformational power of networking

- Enable connection to the National infrastructure
- Extend sharing and creation of knowledge and expertise worldwide
- Empower innovative work and training
- Enhance the Quality of Life for every Marine, Sailor and DON Civilian

What is NMCI? (con't)

Goals

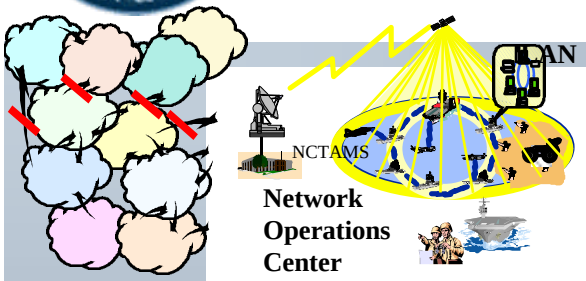
- Improve information security
- Interoperability with joint and allied forces
- Provide information technology services that will enable information superiority and connectivity throughout the DON shore infrastructure
- Optimize cost/unit of service across the enterprise

Description

- A contract vehicle that provides integrated, interoperable, and secure voice, video and data services.
- Orders under this contract will get interoperability, security, technology refreshment and guaranteed quality at a pre-negotiated price. Basic services are mandatory to ensure continuous interoperability. Optional services can be ordered based on individual user needs. User satisfaction is highly incentivized in the contract.

Navy Enterprise Network Evolution

Current State

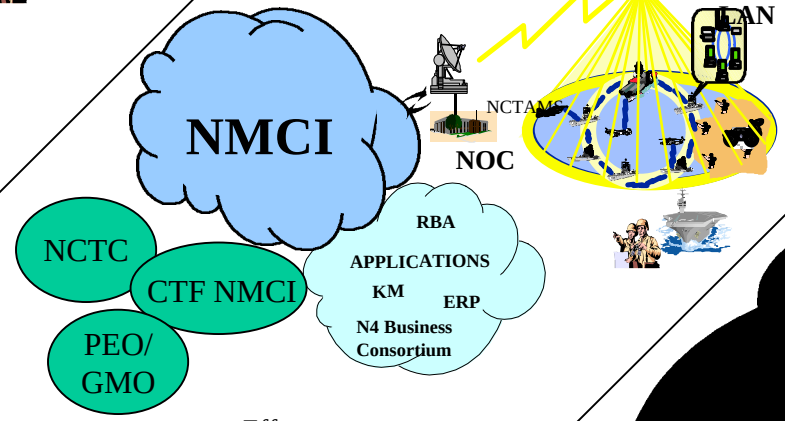


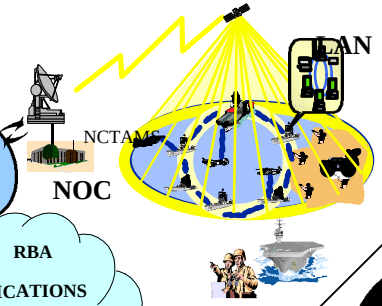
Network Operations Center

Organizations
- NCTC
- NAVSPACE
- NAVSECGRU
- SPAWAR
- FIWC
- NCTF-CND
- NIWA

Efforts
- NMCI
- IT21
- Teleports
- IWARS ISS
- ERP

Transition State





NOC

Organizations
- NAVSPACE
- NAVSECGRU
- SPAWAR
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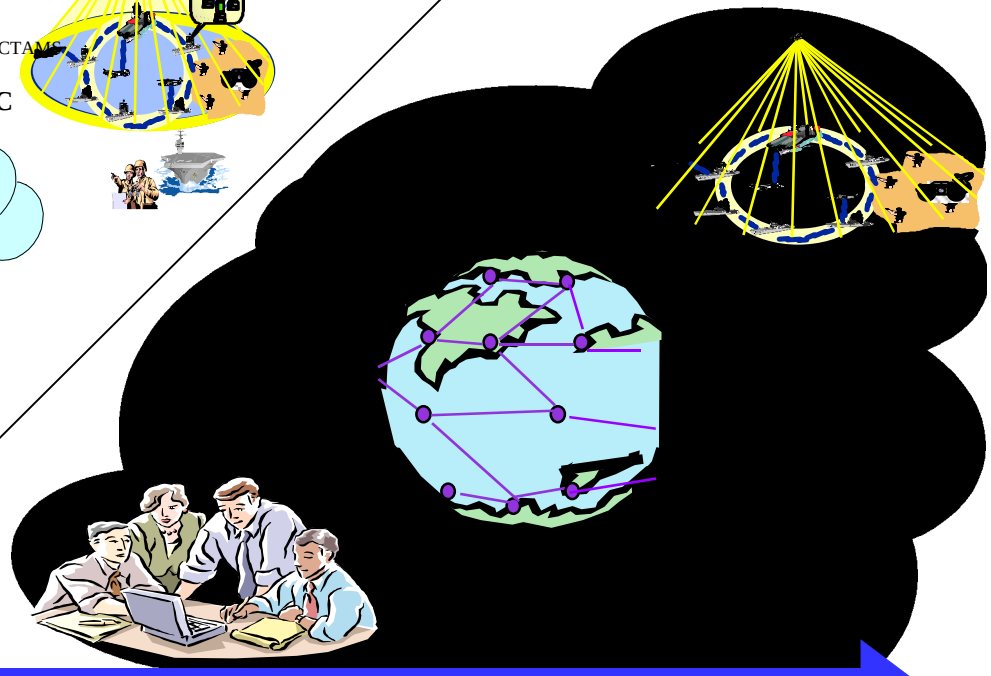
- NIWA

Efforts
- NMCI
- IT21
- Teleports
- IWARS ISS
- ERP

Future State

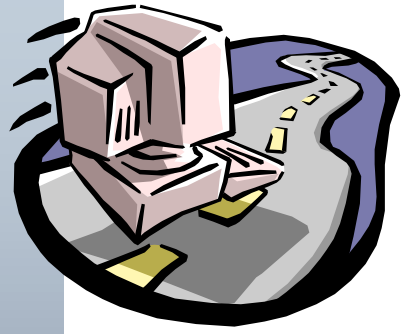


Multiple Networks
Fragmented Resources
Fragmented Fleet Support

Implement NMCI
Regional IT Coordination Centers
Stand up NNIOC

One Enterprise Network
Consolidated resources
Enhanced Fleet Support

How Does NMCI Support the Navy's Core Mission ?



Improved Business Process

- Enhance Standardization and Harmonization of IT Services
- Keep Pace with Technological Change
- ERP (Principal DoN RBA Initiatives) enabled by NMCI
- Increase Reliability and Availability

Enhanced Performance

- Interoperability
- Mission Focus
- Secure, Reliable, Seamless Communications
- Reliability and Availability

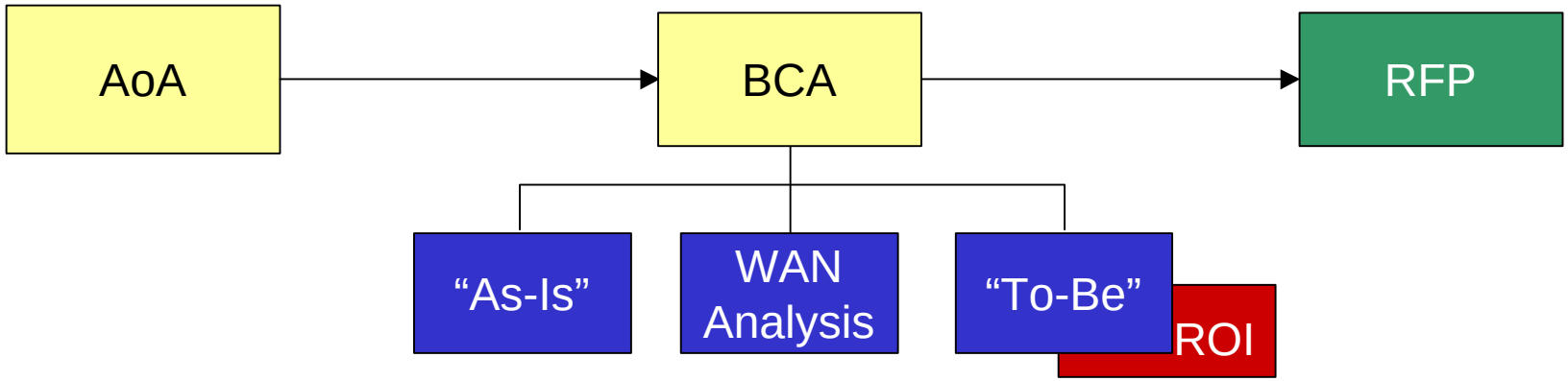
NMCI SLAs incentivized improved business practices to support Navy's warfighting mission

NMCI Business Case Analysis

- Demonstrate whether the NMCI investment is a good business decision compared to the way Naval Information Technology (IT) requirements are currently resourced.
- Present findings that demonstrated both quantitatively and qualitatively in terms of cost, performance, service level and operational considerations.
- The metrics used to assess performance and service level benefits will correlate with the NMCI service levels.
- Compared to the way IT services are provided today… there is a compelling business case for the NMCI alternative
  - Cost
  - Benefits
  - Performance
  - Management
  - ROI
  - Risk
  - Core Mission Implications

NMCI BCA

- **BCA**
  - "As-Is", WAN Analysis, "To-Be"
  - ROI - computed benefits of new business model
  - Purpose: Affirm assumptions and ensure good business sense



BCA Methodology

- **Establish As-Is Baseline**
  - Survey multiple 'representative' organizations to collect technical and cost data
  - Use Gartner Group's TCO Manager tools for data analysis
  - Group Navy organizations by geography and IT characteristics
  - Extrapolate results to develop a Navy-wide baseline

- **Determine To-Be Scenario**
  - Estimate To-Be seat cost for representative N/MCI organizations operating under NMCI at full operational capability (FOC)
  - Compare As-Is and To-Be N/MCI scenarios and articulate business case based on cost, committed service, operational performance, and risk

What is a Seat ?

- **A seat is defined as a desktop or laptop, not an individual or an account**

SEAT =

Sample NMCI Report Output - Cost

To-Be Cost Summary ($FY00)

Non-Recurring Investment Costs ($FY00)	As-Is	To-Be	Net Investment
Government Transition		$ 28,000,000	$ 28,000,000
Security (PKI, IA, and SIPRNET upgrade)	$ 836,000,000	$ 836,000,000	$ -
Vendor Transition		$ 406,000,000	$ 406,000,000
Inside building cable upgrade *		$ 1,061,000,000	$ 1,061,000,000
Outside building cable plant upgrade **	$ 1,000,000,000	$ 1,000,000,000	$ -
Total Investment (Vendor and USN)	**$ 1,836,000,000**	**$ 3,331,000,000**	$ 1,495,000,000

Recurring Costs (Annual $/Seat, FY00)	As-Is	To-Be	Net/Seat Cost
Distributed Computing	$ 3,621	$ 4,814	$ 1,193
Voice (Premise and Long Distance)	$ 631	$ 421	$ (210)
Wide Area Data (transport and labor)	$ 196	$ 153	$ (43)
Tier 1 DISN Surcharge (does not apply to As-Is)		$ 111	$ 111
NMCI Government Management Oversight		$ 84	$ 84
Total Recurring Direct Costs	**$ 4,448**	**$ 5,583**	$ 1,136

* Assumes 1/5 of cost to build from scratch,
** Outside cable plant investment also requir

Indirect Cost per Client - Projected Improvements

$FY00

USN Annual Indirect Costs per user, by category

	As-Is	To-Be	Indirect Cost Reduction	% Reduction
End User Operations	$ 7,690	$ 3,255	$ 4,435	57.7%
Peer Support	$ 2,912	$ 1,105	$ 1,807	62.0%
Casual Learning & Self Supp	$ 2,578	$ 1,148	$ 1,430	55.5%
Formal Learning	$ 447	$ 395	$ 52	11.6%
File and Data Management	$ 1,163	$ 307	$ 856	73.6%
Application Development	$ 590	$ 299	$ 291	49.3%
Downtime	$ 929	$ 387	$ 542	58.3%
Total Indirect Costs	**$ 8,619**	**$ 3,642**	**4,977**	**57.7%**

As-Is TCO Analysis Results Summary

Navy and Marine Corps Annual Direct Costs–As-Is Environment ($FY99)

Organization	Total # of Seats (CONUS)	Average Distributed Per Seat Cost	Average WAD	Average Voice	Total Cost	Average AnnualCost Per Seat
Navy	271,814	$3,673	$178	$654	$1,224,348,614	*$4,504*
Marine Corps	59,840	$3,177	$269	$498	$236,006,566	*$3,944*
DoN*	**331,654**	**$3,583**	**$194**	**$625**	**$1,460,355,180**	***$4,403***

* Weighted average, Navy and Marine Corps As-Is total results

As-Is Cost and Service Levels (USN)

Service Levels Vary Widely Across DoN...

Basic Service Level Categories/Commands	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 10	Site 11	Site 12	Site 13	Site 14	Site 15	Site 16	Site 17	Site 18	Navy Avg
Security Service (Firewalls, Intrusion detection, Encryption)	◑	◑	◔	◑	◔	◑	◑	◑	◑	◑	◔	◔	◔	◑	◔	◑	◑	◔	◑
Wide Area Network Access (DISN, Commercial WAN, Internet)	●	◑	◕	◕	◑	◕	◕	●	●	◕	●	●	●	●	●	◕	●	◕	◕
Infrastructure (voice, video, and data transport)	◕	◑	◕	◕	◕	●	◑	◕	●	◑	◑	◕	◑	◕	◕	◕	●	◕	◕
Joint and Industry Network Interoperability	◑	◑	◑	◑	◔	◑	◑	◑	◕	◕	◔	◕	◑	◑	◑	◑	◔	◕	◑
Pier Services (connectivity, NOC/JFTOC interface)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Enterprise Functions (Help Desk, Tech Support)	◕	◕	◕	◕	◑	●	◕	◑	●	◑	◕	◑	◑	◕	◕	◕	●	◑	◕
Network Management Services	●	◕	●	◑	◑	●	◑	◑	◕	◔	◑	◕	◑	●	◕	◕	●	◑	◕
Desktop (Standard, high end, laptop)	◑	◔	◑	◔	◔	◑	◔	◑	◑	◑	◑	◑	◑	◑	◑	◔	◑	◑	◑
Desktop Software (Standard software suite)	◕	◕	◕	◕	◑	◕	◕	◕	●	◕	◕	◕	◕	◕	◕	◕	◕	◕	◕
Organizational Messaging (AUTODIN, DMS)	◑	◑	◑	◑	◔	◕	◔	◑	◕	◔	◑	◑	◑	◑	◕	◑	◑	◑	◑
Training	◔	◕	◕	◑	◔	◕	◔	◑	◕	◔	◑	◑	◑	◕	◔	◑	◑	◑	◑
Directory Services	◕	◕	◕	◕	◕	●	◔	◕	●	◔	◕	◕	◕	●	◕	◕	●	◕	◕
E-mail	●	◕	◑	◕	●	◑	◑	◑	◕	◕	◑	◑	◕	◕	◑	◕	◑	◑	◕
Remote Telephone Access	●	◕	◕	◑	◑	●	◔	◕	◕	◔	◕	◕	◕	◕	◑	◕	●	◑	◕
Domain Name Service	◔	◕	◕	◕	◕	◕	◔	◕	◕	◔	◔	◕	◕	●	●	◕	●	◕	◕
Help Desk/Tech Support	●	◕	●	◕	◕	●	◕	◕	●	◕	●	●	●	●	◕	◕	●	●	●
LAN (building LANs)	◕	◕	●	◕	◕	●	◔	◕	◕	◔	◕	●	●	●	●	◕	●	◕	◕
System Management Services	◕	◑	◑	◑	◔	◕	◑	◑	◕	◑	◔	◑	◔	◕	◑	◑	●	◔	◑

○ No Service Available
◔ Little Exhibition of NMCI Service Level
◑ Partially Exhibits NMCI Service Level
◕ Exhibits Majority of NMCI Service Level
● Fully Exhibits or Exceeds NMCI Service Level

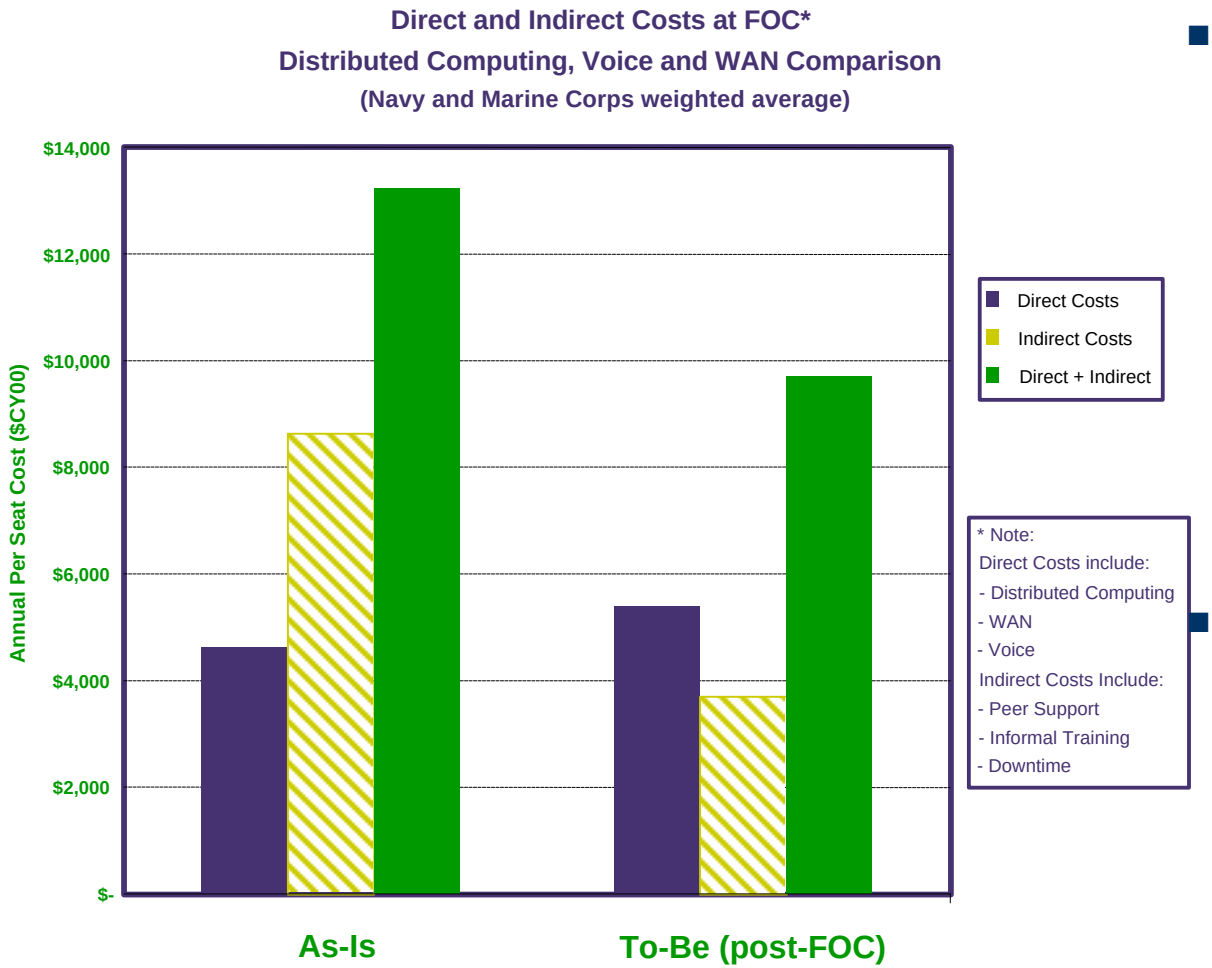
As-Is Cost and Service Levels (USMC)

Basic Service Level Categories/Commands	USMC Sample Groups				
	Group A	Group B	Group C	Group D	MCEN
Security Service (firewalls, intrusion detection, encryption)	◑	◑	◑	◔	◑
Wide Area Network Access (DISN, Commercial WAN, Internet)	◑	◕	◕	◑	◑
Infrastructure (voice, video & data transport)	◕	◑	◔	◑	◑
Joint and Industry Network Interoperability	◔	◔	◔	◔	◔
Pier Services (connectivity, NOC/JFTOC interface)	N/A	N/A	N/A	N/A	N/A
Enterprise Functions (Help Desk/Tech Support	◑	◕	◕	◔	◑
Network Management Services	◑	◕	◔	◔	◑
Desktop (standard, high-end, laptop)	◑	◕	◑	◔	◑
Desktop Software (standard software suite)	◑	◔	◑	◔	◑
Organizational Messaging (AUTODIN DMS)	◑	◑	◑	◑	◑
Training	◔	◕	◑	◔	◑
Directory Service	●	●	●	●	●
E-mail	◑	◑	◑	◑	◑
Remote Telephone Access	◔	◕	◕	◔	◑
Domain Name Service*	●	●	●	●	●
Help Desk/Tech Support	◑	◕	◕	◑	◑
LAN (building LANs)	●	◕	◕	●	●
System Management Services	◑	◑	◑	◑	◑

○ No Service Available
◔ Little Exhibition of NMCI Service Level
◑ Partially Exhibits NMCI Service Level
◕ Exhibits Majority of NMCI Service Level
● Fully Exhibits or Exceeds NMCI Service Level

Direct and Indirect Costs

Value	ROI
Benefits	Risk

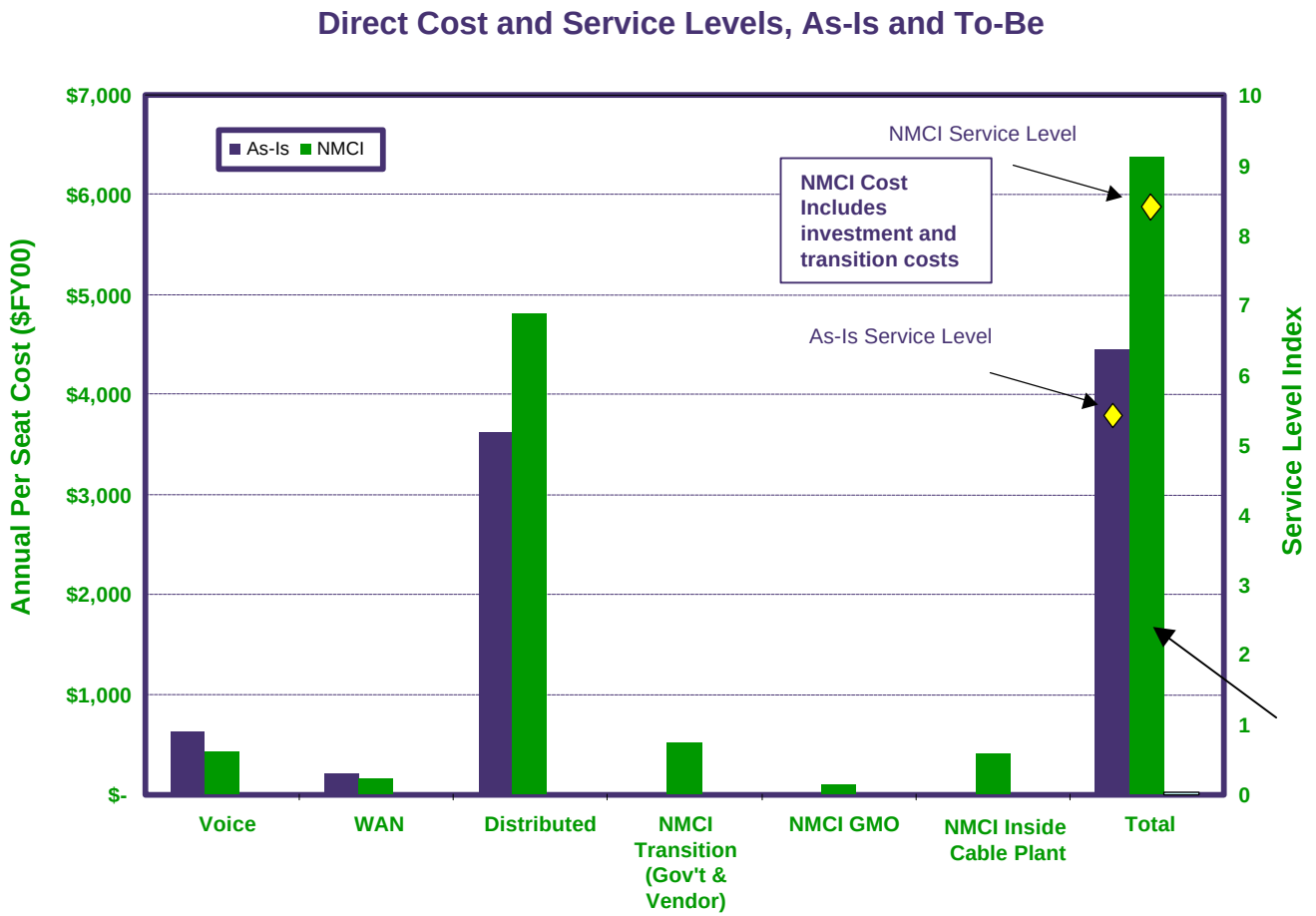


- **Direct Costs** are direct IT system expenses (hardware, software and labor support). Actual cost data was obtained for these categories via on-site survey team data collection efforts
- **Indirect Costs** are a measure of the IT System's impact on end-user productivity and were quantified for the NMCI BCA in $

To-Be Costs and Service Improvements

Value	ROI
Benefits	Risk

- **Per Seat Costs are displayed by category in the table below, which compares the actual As-Is and estimated To-Be costs and associated service levels.**



Calculation of Return on Investment

Value	ROI
Benefits	Risk

Investment Costs (To-Be) include:

- Vendor Transition Costs
- NMCI GMO
  - Change Management
  - Transition Management
- Personnel Transition Costs
- Enhanced Security (PKI, IA, SIPRNET)
- Inside Cable Plant Upgrade
- BLII Cable Plant Investment

Investment Costs (As-Is) include:

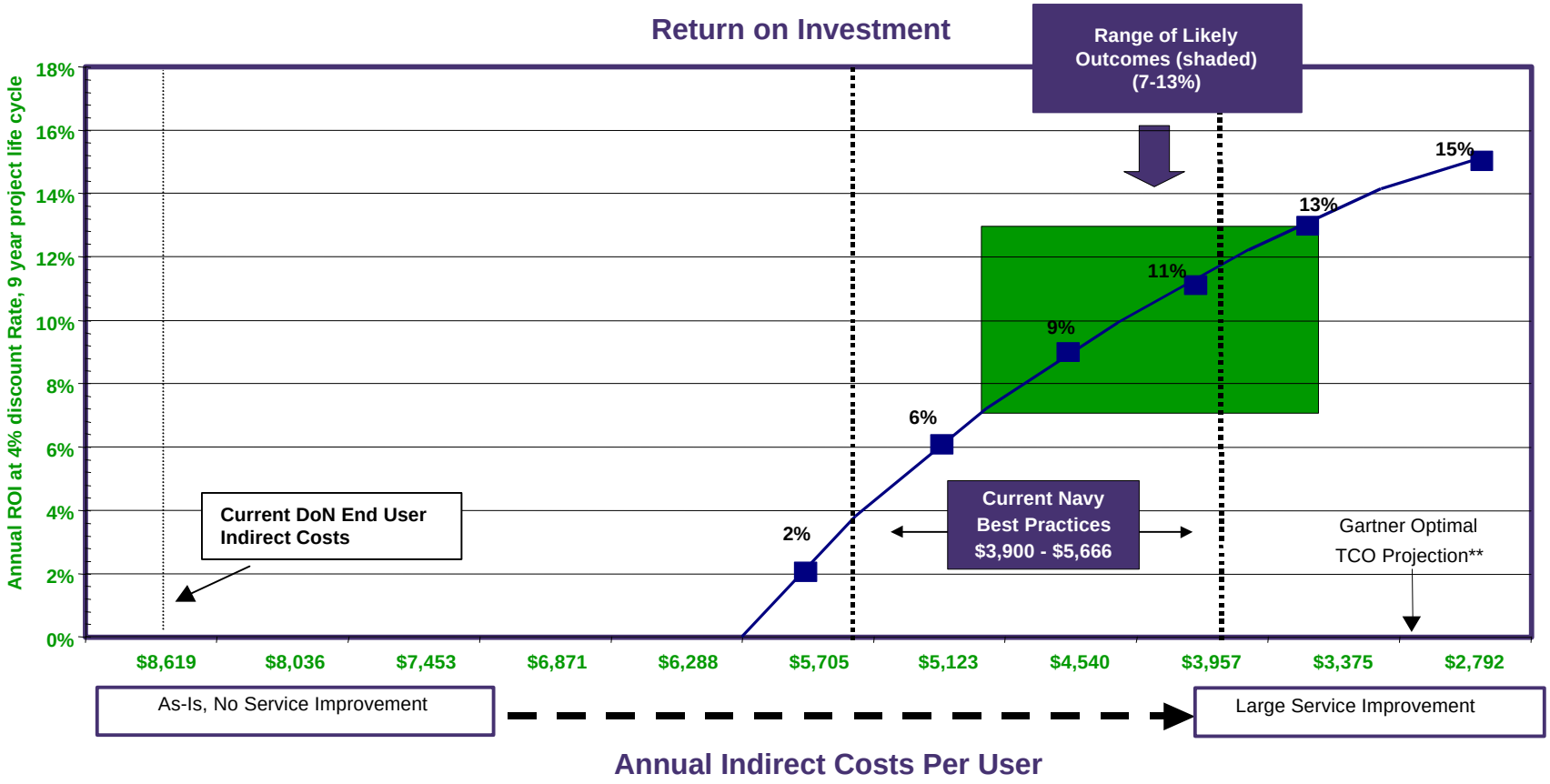
- Enhanced Security (PKI, IA, SIPRNET)
- BLII Cable Plant Investment

$$\frac{\text{NET BENEFITS}}{\text{NET INVESTMENTS}} = \text{ROI}$$

$$\frac{\text{Direct Costs Savings (-) (As-Is Seat Cost – NMCI Seat Cost) \# of Seats} + \text{Indirect Cost Savings (Improved Service and Productivity)}}{\text{Investment Costs* (To-Be)} - \text{Investment Costs (As-Is)}} = \text{ROI}$$

Return on Investment (ROI)

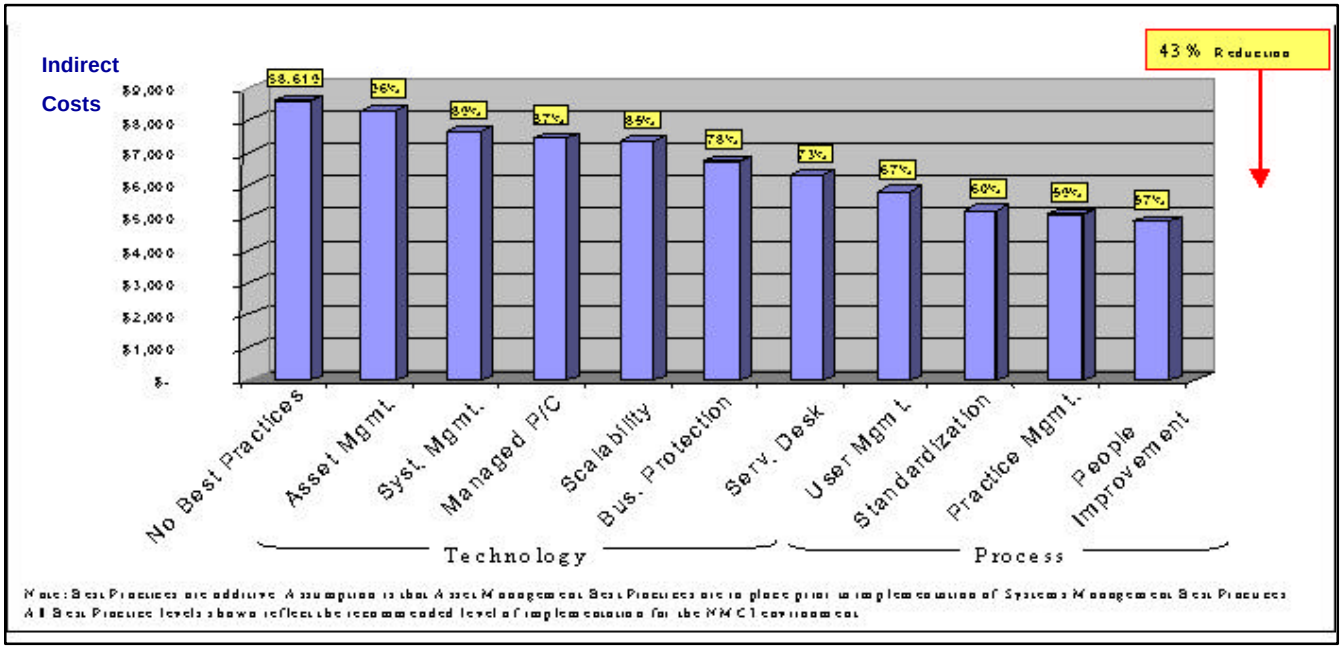
Value	ROI
Benefits	Risk



ROI: Best Practices Impact on Indirect Costs

Value | **ROI**
Benefits | Risk

Best Practices Drive Down Indirect Costs



- **Best Practices are the proper deployment of technology integrated with process and management practices that deliver maximum usable functionality at minimum cost.**
  - **Implementation of IT Technologies, Policy and Management Best Practices, as defined by Gartner, is the proven approach to shift resources from unproductive activities to productive core business functions**

Questions?